WHAT IS CLAIMED IS:

1. A method comprising:

generating a medical apparatus by providing a coil comprising a plurality of primary loops along a longitudinal direction, and

for each of one or more of the primary loops, forming a secondary loop on the primary loop.

2. The method of claim 1, wherein the coil comprises a helical coil.

3. The method of claim 1, wherein forming the secondary loop on the primary loop comprises twisting a portion of the primary loop to form the secondary loop.

4. The method of claim 3, wherein twisting a portion of the primary loop comprises gripping a portion of the primary loop using a clip and rotating the clip to twist the portion of the primary loop.

5. The method of claim 4, wherein the clip comprises magnetized portions having different polarities.

6. The method of claim 5 wherein the magnetized portions are disposed at the tips of the clip that contact the primary loop or the secondary loop.

7. The method of claim 5 wherein the clip comprises tips that contact the primary loop and handles that allow manipulation of the clip, the magnetized portions being disposed at the handles.

8. The method of claim 5, further comprising, for each of one or more primary loops, using a clip to grip a portion of the primary loop and rotating the clip to twist the portion, and aligning the clips of different primary loops so that a magnetized portion of a clip having a first polarity is aligned with a magnetized portion of an adjacent clip having a second polarity.

9. The method of claim 4, further comprising moving the coil relative to the clip and using the clip to twist each of the one or more primary loops in turn to form a corresponding secondary loop.

10. The method of claim 4, further comprising positioning the coil about a helical groove of an elongated member, and moving the coil relative to the clip by rotating the elongated member.

11. The method of claim 3, wherein twisting a portion of the primary loop to form the secondary loop comprises gripping a portion of the primary loop using a hook and rotating the hook to twist the portion of the primary loop.

12. The method of claim 1, wherein after formation of the secondary loop, the combination of the primary loop and the secondary loop has a dimension that is smaller or equal to a dimension of the primary loop prior to formation of the secondary loop,

the dimensions being measured along a lateral direction at an angle to the longitudinal direction,

the dimension of the combination of the primary loop and the secondary loop being defined as the diameter of a bounding circle of the primary and secondary loops, and

the dimension of the primary loop being defined as the diameter of a bounding circle of the primary loop.

13. The method of claim 1, wherein the secondary loop comprises a peripheral loop.

14. The method of claim 1, wherein the secondary loop comprises an endoloop.

15. The method of claim 1, further comprising inserting an elongated member into the coil, for each of the one or more primary loops, urging a first portion of a primary loop towards the elongated member to cause a second portion of the primary loop to move away from the elongated member, providing more space to manipulate the second portion of the primary loop to form the secondary loop.

16. The method of claim 1, wherein the coil comprises at least one of biodegradable polymeric material, non-biodegradable polymeric material, metal alloy, and ceramic material.

17. The method of claim 1, further comprising, for all of the primary loops, forming a secondary loop on the primary loop.

18. The method of claim 17, wherein after formation of the secondary loop, the medical apparatus has a dimension that is bound by a first bounding cylinder, which is smaller than a

second bounding cylinder that bounds the coil prior to formation of the secondary loops.

19. The method of claim 1, further comprising forming two or more secondary loops for each of the one or more primary loops.

20. The method of claim 1, wherein the secondary loop comprises a partially open curve that does not form a closed loop.

21. The method of claim 1, wherein the secondary loop comprises a closed loop.

22. The method of claim 1, further comprising attaching a fiber to a primary loop after formation of a corresponding secondary loop to maintain the shape of the primary and secondary loops, the fiber extending in the longitudinal direction.

23. The method of claim 22, wherein attaching the fiber to the primary loop comprises injecting a first gas stream towards the fiber and a portion of the primary loop to heat the fiber and the portion of the primary loop.

24. The method of claim 23, wherein the first gas stream is configured to heat the fiber and the wire to a temperature close to but lower than the melting point of the fiber and/or primary loop cause the fiber and/or the portion of the primary loop to soften.

25. The method of claim 23, wherein the first gas stream comprises an intermittent gas stream.

26. The method of claim 23, further comprising urging the fiber against the portion of the primary loop.

27. The method of claim 26, wherein urging the fiber against the portion of the primary loop comprises using a second gas stream to urge the fiber against the portion of the primary loop, the temperature of the second gas stream configured to cause the fiber and the heated portion of the primary loop to solidify.

28. The method of claim 23, further comprising using a laser beam to heat the fiber and the portion of the primary loop.

29. The method of claim 1, further comprising winding a wire around an elongated member to form the coil.

30. The method of claim 29, wherein the elongated member has a longitudinal axis and a cross-section having a circumference with first portions that are bound by a first bounding circle and second portions that are bound by a second bounding circle, the second bounding circle being within the first bounding circle.

31. The method of claim 30, wherein winding the wire around the elongated member causes each of the one or more primary loops to have first portions that are bound by the first bounding circle and second portions that are bound by the second bounding circle.

32. The method of claim 31, further comprising forming the secondary loop from one of the first portions of the primary loop.

33. The method of claim 1, wherein providing the coil comprises cutting an elongated tube along a helical path.

34. The method of claim 33, wherein the helical path has a variable pitch.

35. The method of claim 33, wherein a longitudinal axis of the helical path substantially coincides with a longitudinal axis of the elongated tube.

36. The method of claim 33, wherein the elongated tube comprises at least one of biodegradable polymeric material, non-biodegradable polymeric material, metal alloy, ceramic material, and composite material.

37. The method of claim 33, wherein cutting the elongated tube comprises directing a laser beam along a helical path on the surface of the elongated tube to cut the tube into the coil.

38. The method of claim 33, wherein cutting the elongated tube comprises directing a liquid jet along a helical path on the surface of the elongated tube to cut the tube into the coil.

39. The method of claim 33, wherein cutting the elongated tube comprises using a roller blade to cut the tube.

40. The method of claim 33, wherein cutting the elongated tube comprises using more than one roller blades to cut the tube to simultaneously produce more than one coil.

41. The method of claim 33, wherein cutting the elongated tube comprises using a knife having a cutting tip with curved edges.

42. The method of claim 33, further comprising treating the coil after cutting so that the surface of the coil becomes smoother.

43. The method of claim 42, wherein treating the coil comprises heating and softening the coil to reduce edges on the coil.

44. The method of claim 33, wherein the elongated tube has a diameter in a range from 0.5 to 80 mm.

45. The method of claim 33, wherein the elongated tube has a cross section having at least one of circular, oval, triangular, square, and rectangular shape.

46. The method of claim 33, wherein the elongated tube has a cross-section having a circumference with first portions that are bound by a first bounding circle and second portions that are bound by a second bounding circle, the second bounding circle being within the first bounding circle.

47. The method of claim 1, wherein providing the coil comprises extruding a material from a container to form the coil.

48. The method of claim 47, further comprising moving the container in a specified motion to form a coil having a circular, triangular, rectangular, polygonal, or oval cross section.

49. A method comprising:

generating a medical apparatus having a small-dimension state and a large-dimension state, the small-dimension state being formed by providing a coil comprising a plurality of primary loops positioned along a longitudinal direction,

for each of one or more of the primary loops, forming one or more secondary loops on the primary loop, and

attaching one or more longitudinal fibers to the primary loops to tend to maintain the relative positions of the primary loops in the small-dimension state and the large-dimension state.

50. A method comprising:

generating a medical apparatus having a small-dimension state and a large-dimension state, including

extruding a material from a container and moving the container in a specified motion so that extruded material forms a coil including a plurality of primary loops positioned along a longitudinal direction, each of one or more of the primary loops having one or more secondary loops, and

attaching one or more longitudinal fibers to the primary loops to tend to maintain the relative positions of the primary loops in the small-dimension state and the large-dimension state.

51. The method of claim 50 in which the material comprises shape memory alloy.

52. A method comprising:

providing a coil having primary loops, each of one or more primary loops having one or more peripheral loops; and

bending one of the peripheral loops towards a central portion of the coil to form an endoloop.

53. An apparatus comprising:

an expandable medical apparatus comprising a coil having a plurality of primary loops positioned along a longitudinal direction, each of one or more of the primary loops having one or more secondary loops on the primary loop, the distance between adjacent primary loops being different at different portions of the coil.

54. The apparatus of claim 53, further comprising one or more longitudinal fibers attached to the primary loops to tend to maintain the relative positions of the primary loops.

55. The apparatus of claim 53, wherein the coil comprises at least one of biodegradable polymeric material, non-biodegradable polymeric material, metal alloy, ceramic material, and composite material.

56. The apparatus of claim 53, wherein a first portion of the coil where adjacent primary loops are spaced apart at smaller distances has a larger resistance to deformation due to pressure exerted from outside of the coil, as compared to a second portion of the coil where adjacent primary loops are spaced apart at larger distances.

57. An apparatus comprising

means for supporting a tube;

means for cutting a tube to form a coil having primary loops; and

means for forming one or more secondary loops from each of one or more primary loops.

58. The apparatus of claim 57, wherein the supporting means comprises a rod that is inserted into the tube.

59. The apparatus of claim 57, wherein the supporting means comprises an elongated screw that in inserted into the tube, the elongated screw having sharp edges.

60. The apparatus of claim 57, wherein the supporting means comprises a plurality of knives, each having curved cutting edges.

61. The apparatus of claim 57, wherein the cutting means comprises two or more knives positioned side-by-side to cut the tube simultaneously.